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ЕДИНАЯ СЛУЖБА СЕРВИСА

РЕМОНТ БЫТОВОЙ ТЕХНИКИ

ИНСТРУКЦИИ ПО ЭКСПЛУАТАЦИИ К БЫТОВОЙ ТЕХНИКЕ

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МНОГОКАНАЛЬНЫЙ

JVC

SCHEMATIC DIAGRAMS

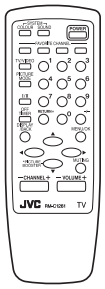
COLOUR TELEVISION

AV-21YMG4/G, AV-21YMG4/S, AV-2104Y/E, AV-2114Y/E

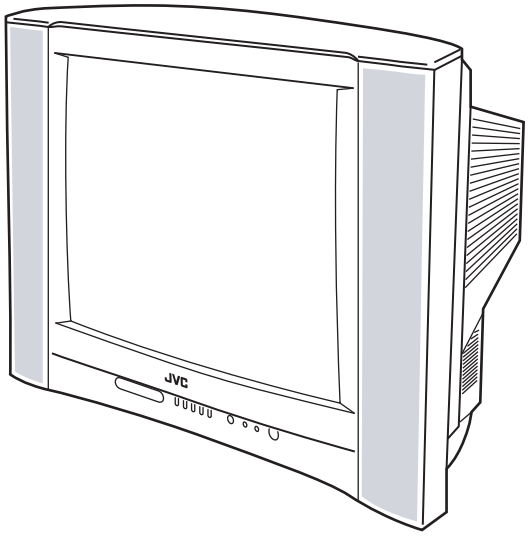
CD-ROM No.SML200410

BASIC CHASSIS
CW

[AV-2114Y/E]



[AV-21YMG4/G]
[AV-21YMG4/S]
[AV-2104Y/E]



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No.YA126
2004/9

AV-21YMG4/G,AV-21YMG4/S,AV-2104Y/E, AV-2114Y/E
STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety ciritical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal	: Colour bar signal
(2)Setting positions of each knob/button and variable resistor	: Original setting position when shipped
(3)Internal resistance of tester	: DC 20kΩ/V
(4)Oscilloscope sweeping time	: H ⇒ 20μs / div
	: V ⇒ 5ms / div
	: Othters ⇒ Sweeping time is specified
(5)Voltage values	: All DC voltage values

∗ Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

● In the PW board : R209 → R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

No unit	: [Ω]
K	: [kΩ]
M	: [MΩ]

● Rated allowable power

No indication	: 1/16 [W]
Others	: As specified

● Type

No indication	: Carbon resistor
OMR	: Oxide metal film resistor
MFR	: Metal film resistor
MPR	: Metal plate resistor
UNFR	: Uninflammable resistor
FR	: Fusible resistor

∗ Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

1 or higher	: [pF]
less than 1	: [μF]

● Withstand voltage

No indication	: DC50[V]
Others	: DC withstand voltage [V]
AC indicated	: AC withstand voltage [V]

∗ Electrolytic Capacitors

47/50[Example]: Capacitance value [μF]/withstand voltage[V]

● Type

No indication	: Ceramic capacitor
MM	: Metalized mylar capacitor
PP	: Polypropylene capacitor
MPP	: Metalized polypropylene capacitor
MF	: Metalized film capacitor
TF	: Thin film capacitor
BP	: Bipolar electrolytic capacitor
TAN	: Tantalum capacitor

(3)Coils

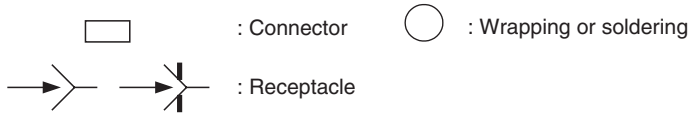
No unit	: [μH]
Others	: As specified

(4)Power Supply

∗ Respective voltage values are indicated

(5)Test point

(6)Connecting method



(7)Ground symbol

⊥ : LIVE side ground

⏚ : ISOLATED(NEUTRAL) side ground

⏚ : EARTH ground

▽ : DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND and the ISOLATED(NEUTRAL) : (⏚) side GND. Therefore, care must be taken for the following points.

(1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. if the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◆ **Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

NOTE

◆ **Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.**
When ordering parts, please use the numbers that appear in the Parts List.

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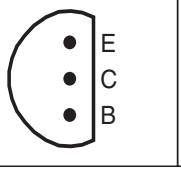
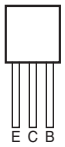
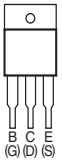
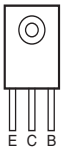
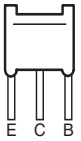
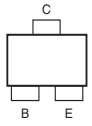
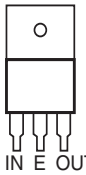
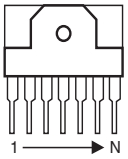
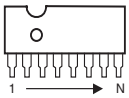
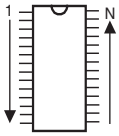
SEMICONDUCTOR SHAPES

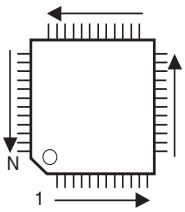
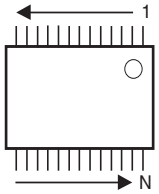
TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW
				

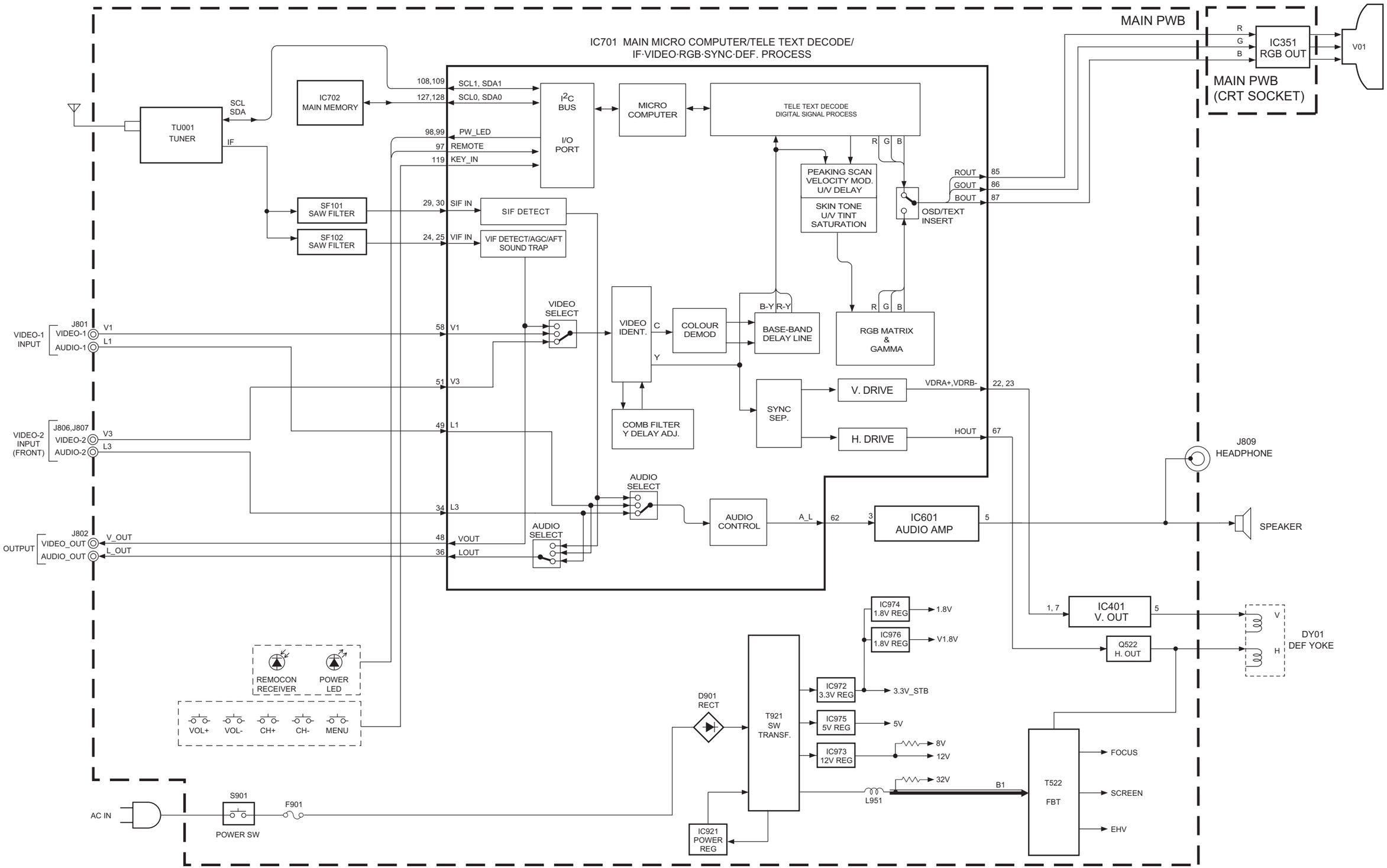
CHIP IC

TOP VIEW		
		

USING P.W.BOARD

P.W. BOARD ASS'Y NAME	AV-21YMT4/G	AV-21YMG4/S	AV-2104Y/E	AV-2114Y/E
MAIN P.W. BOARD	SCW-1312A-H2	SCW-1313A-H2	SCW-1314A-H2	SCW-1311A-H2

BLOCK DIAGRAM



CIRCUIT DIAGRAMS

MAIN PWB CIRCUIT DIAGRAM [AV-21YMG4/G,AV-21YMG4/S] (1/3)

*	21YMT40A	21YMG40A	21YMG45A	21CMT40A	21CMG40A	21DMG45A	21FMG480A
SP01	GAS0151 ~001	GAS0151 ~001	GAS0151 ~001	GAS0086 ~001	GAS0086 ~001	GAS0086 ~001	GAS0151 ~001

MAIN MICRO COMPUTER/
IF·VIDEO·RGB·SYNC·DEF.PROCESS

MAIN PWB ASS'Y (1/3)
SCW-1312A-H2 [AV-21YMG4/G]
SCW-1313A-H2 [AV-21YMG4/S]

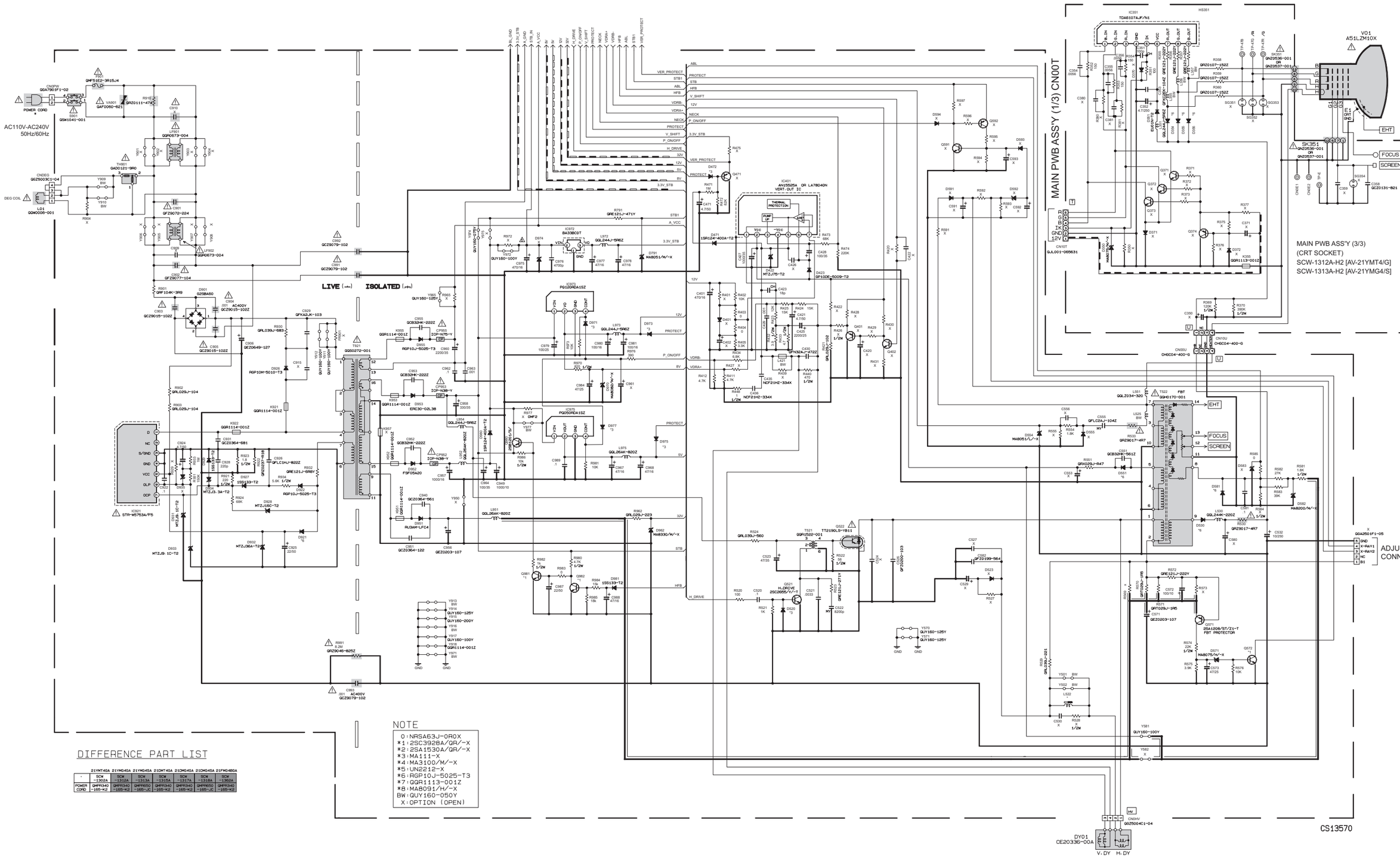
Note: 1. Refer to part list for the part number of IC701 and IC702.
2. Refer to page 2-15 for voltages of this circuit diagram.
3. Refer to page 2-16 for waveforms of this circuit diagram.

DIFFERENCE PART LIST

*	21YMT40A SCW ~1302A	21YMG40A SCW ~1310A	21YMG45A SCW ~1313A	21CMT40A SCW ~1317A	21CMG40A SCW ~1317A	21DMG45A SCW ~1318A	21FMG480A SCW ~1302A
D001	MA8051 -(M)-X	MA8051 -(M)-X	MA8051 -(M)-X	X	X	X	X
TU001	GAU0389 ~001	GAU0328 ~001	GAU0389 ~001	GAU0246 ~002	GAU0246 ~002	GAU0363 ~001	GAU0246 ~002
Q001	2SK1374 ~X	2SK1374 ~X	2SK1374 ~X	X	X	X X	
Q002	2SK1374 ~X	2SK1374 ~X	2SK1374 ~X	X	X	X X	
R006	0	0	X 0	X		X X	
R007	10K	10K	10K	X	X	X X	
R008	10K	10K	10K	X	X	X X	
C006	2.2/50	2.2/50	2.2/50	33/16	33/16	33/16	33/16
Y005	X	X	0 X	0		0 0	
Y006	X	X	X	0	0	0 0	

CS13570

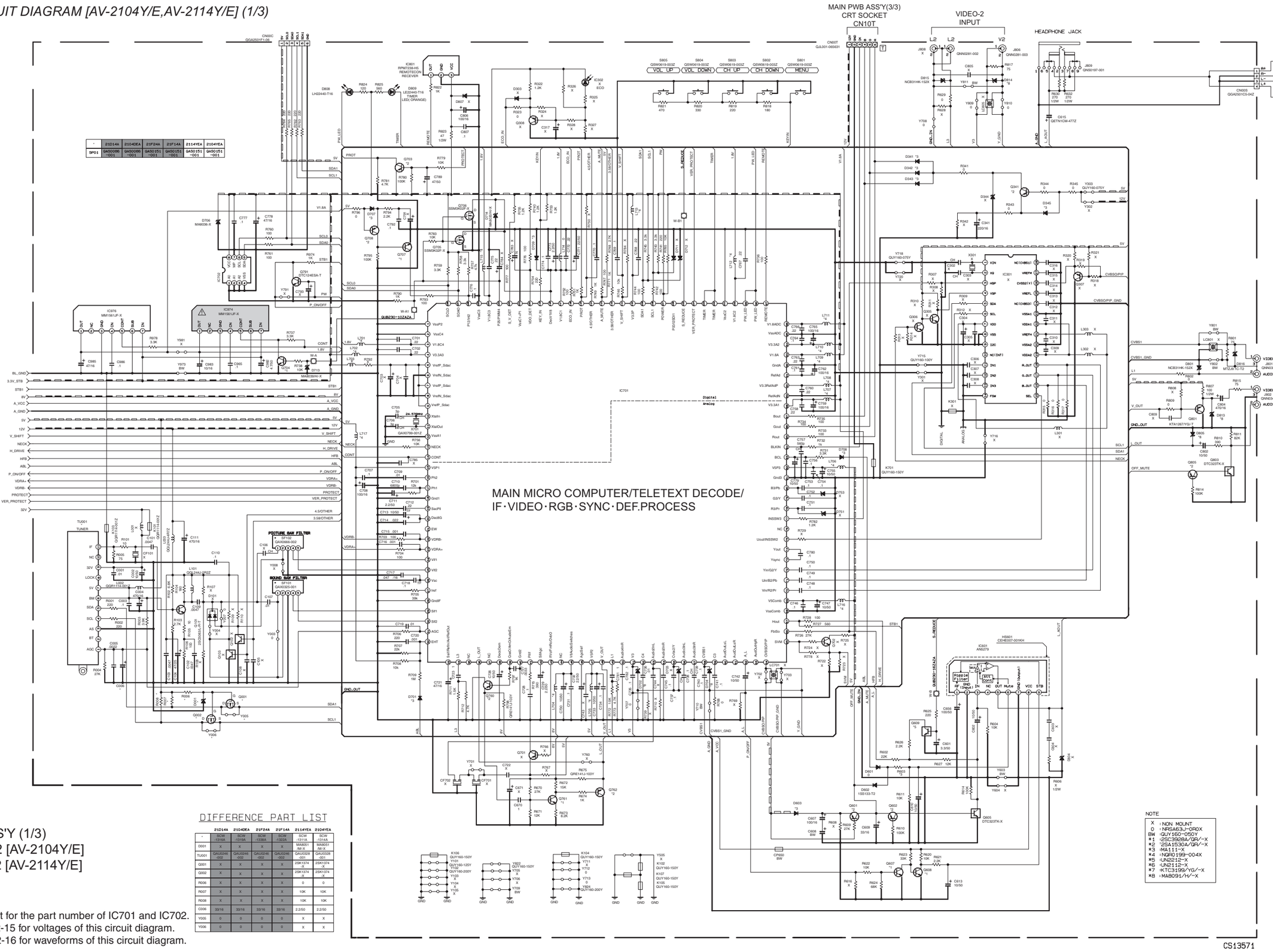
MAIN PWB CIRCUIT DIAGRAM [AV-21YMG4/G,AV-21YMG4/S] (2/3),(3/3)



Note: 1. Refer to part list for the part number of IC701 and IC702.
2. Refer to page 2-15 for voltages of this circuit diagram.
3. Refer to page 2-16 for waveforms of this circuit diagram.

MAIN PWB ASS'Y (1/3)
SCW-1312A-H2 [AV-21YMG4/G]
SCW-1313A-H2 [AV-21YMG4/S]

MAIN PWB CIRCUIT DIAGRAM [AV-2104Y/E,AV-2114Y/E] (1/3)



·	21D14A	2104DEA	21F24A	21F14A	2114YEA	2104YEA
SP01	GAS0086 -001	GAS0086 -001	GAS0151 -001	GAS0151 -001	GAS0151 -001	GAS0151 -001

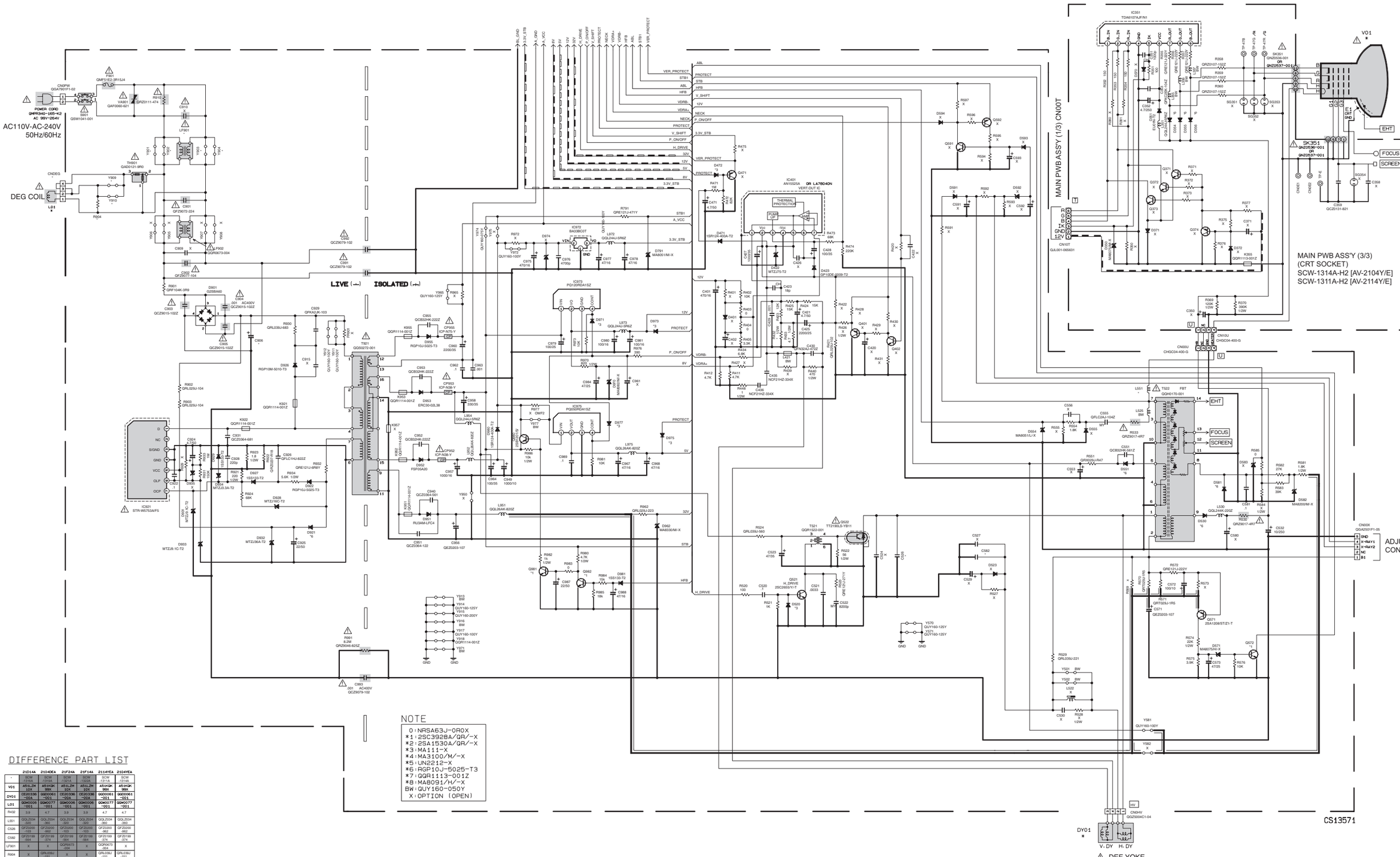
·	SCW-1311A	SCW-1314A	SCW-1338A	SCW-1322A	SCW-1311A	SCW-1314A
D001	X	X	X	X	MA8051-IM-X	MA8051-IM-X
TU001	GAU0246-002	GAU0246-002	GAU0246-002	GAU0246-002	GAU0328-001	GAU0328-001
Q001	X	X	X	X	2SK1374-X	2SK1374-X
Q002	X	X	X	X	2SK1374-X	2SK1374-X
R006	X	X	X	X	0	0
R607	X	X	X	X	10K	10K
R608	X	X	X	X	10K	10K
C006	33/16	33/16	33/16	33/16	2.2/50	2.2/50
Y005	0	0	0	0	X	X
Y006	0	0	0	0	X	X

MAIN PWB ASS'Y (1/3)
SCW-1314A-H2 [AV-2104Y/E]
SCW-1311A-H2 [AV-2114Y/E]

Note: 1. Refer to part list for the part number of IC701 and IC702.
2. Refer to page 2-15 for voltages of this circuit diagram.
3. Refer to page 2-16 for waveforms of this circuit diagram.

NOTE
X : NON MOUNT
0 : NRSA63J-0R0X
BW : QUY160-050Y
*1 : 2SC3928A/QR/-X
*2 : 2SA1530A/QR/-X
*3 : MA111-X
*4 : NQR0199-004X
*5 : UN2212-X
*6 : UN2112-X
*7 : KTC3199/YG/-X
*8 : MA8091/H/-X

MAIN PWB CIRCUIT DIAGRAM [AV-2104Y/E,AV-2114Y/E] (2/3),(3/3)



NOTE

0 : NRSA63J-0R0X
*1 : 2SC3928A/GR/-X
*2 : 2SA1530A/GR/-X
*3 : MA111-X
*4 : MA3100/M/-X
*5 : UN2212-X
*6 : RGP10J-5025-T3
*7 : QGR1113-001Z
*8 : MA8091/H/-X
BW : QUY160-050Y
X : OPTION (OPEN)

DIFFERENCE PART LIST

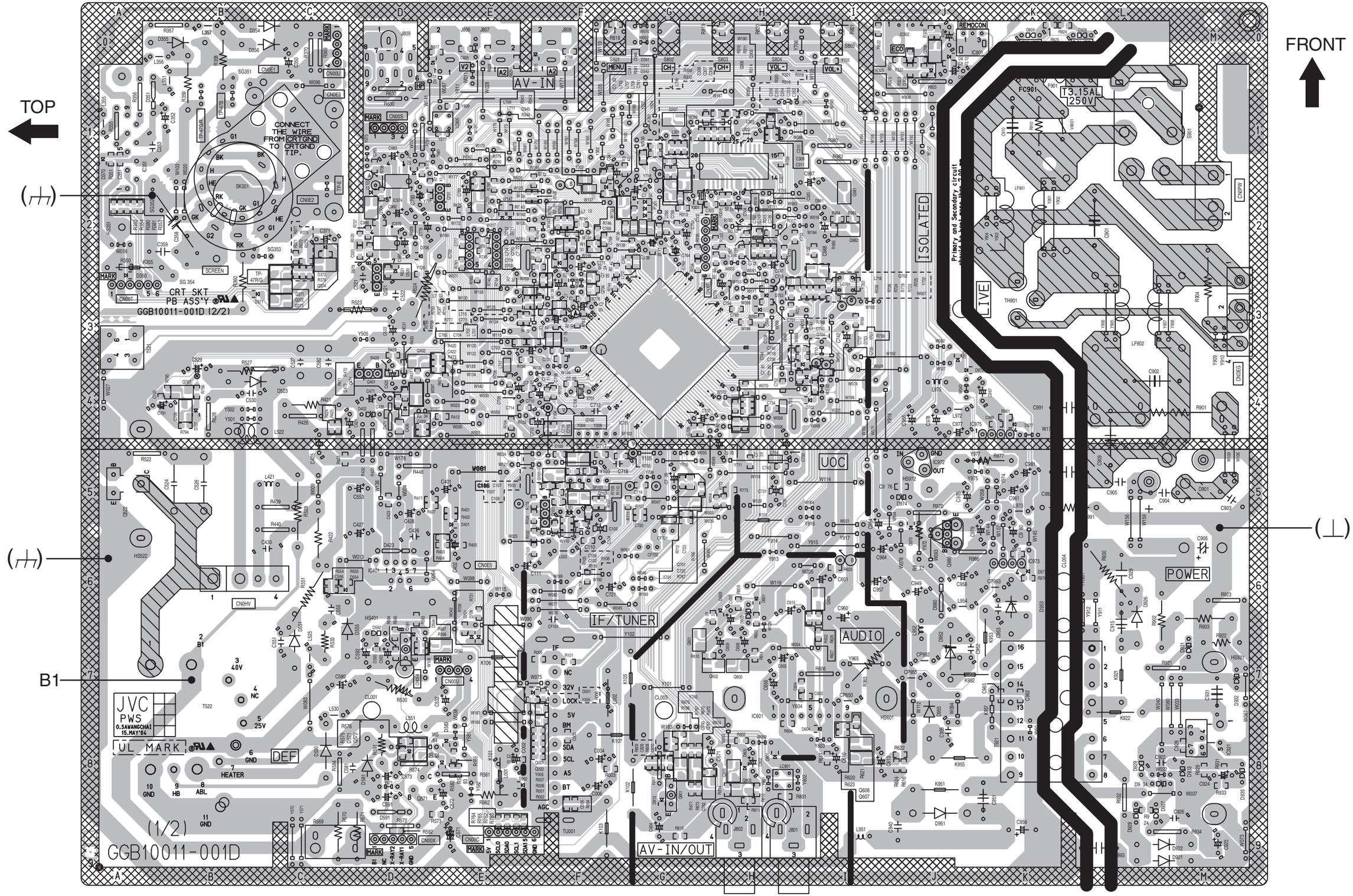
	21D14A	21D4DEA	21F24A	21F14A	21144YEA	21G4YEA
	SCW-1314A	SCW-1314A	SCW-1321A	SCW-1332A	SCW-1311A	SCW-1314A
VG1	A51LZ4-10X	A51H2K-99X	A51LL2H-10X	A51LL2W-10X	A51H2K-99X	A51H2K-99X
DY01	CE20336-*00A	GQD0061-*001	CE20336-*00A	CE20336-*00A	GQD0061-*001	GQD0061-*001
LO1	GQH0008-*001	GQM0077-*001	GQM0006-*001	GQM0006-*001	GQM0077-*001	GQM0077-*001
R432	3.9	4.7	3.9	3.9	4.7	4.7
L551	QQL2034-320	QQL2034-360	QQL2034-320	QQL2034-320	QQL2034-360	QQL2034-360
C526	QFZ0200-103	QFZ0200-362	QFZ0200-103	QFZ0200-103	QFZ0200-362	QFZ0200-362
C582	QFZ0199-564	QFZ0199-374	QFZ0199-564	QFZ0199-564	QFZ0199-374	QFZ0199-374
LF901	X	X	QQR0673-004	X	QQR0673-004	X
R904	X	QRL039J-151	X	X	QRL039J-151	QRL039J-151
C906	QEZ0649-127	QEZ0633-127	QEZ0649-127	QEZ0649-127	QEZ0633-127	QEZ0633-127
Y901	QUY160-200Y	QUY160-260Y	X	QUY160-200Y	X	QUY160-260Y
Y902	QUY160-200Y	QUY160-260Y	X	QUY160-200Y	X	QUY160-260Y
Y903	QUY160-100Y	QUY160-160Y	X	QUY160-100Y	X	QUY160-160Y
Y904	QUY160-100Y	QUY160-160Y	X	QUY160-100Y	X	QUY160-160Y
Y909	BW	X	BW	BW	X	X
Y910	BW	X	BW	BW	X	X
CN06S	QGZ500-3C1-02	QGZ500-3C1-04	QGZ500-3C1-02	QGZ500-3C1-02	QGZ500-3C1-04	QGZ500-3C1-04

MAIN PWB ASS'Y (2/3)
SCW-1314A-H2 [AV-2104Y/E]
SCW-1311A-H2 [AV-2114Y/E]

Note: 1. Refer to part list for the part number of IC701 and IC702.
2. Refer to page 2-15 for voltages of this circuit diagram.
3. Refer to page 2-16 for waveforms of this circuit diagram.

PATTERN DIAGRAMS

MAIN PWB PATTERN



VOLTAGE CHARTS

<MAIN PWB>

MODE PIN NO.	DC (V)
IC401	
1	2.9
2	25.7
3	1.7
4	0
5	13.0
6	26.0
7	2.9
IC601	
1	18.5
2	0
3	0.1
4	0
5	9.1
6	2.1
7	0
8	19.6
9	13.4
IC701	
1	0
2	0
3	1.8
4	3.2
5	3.2
6	0
7	0
8	0
9	3.3
10	1.5
11	1.5
12	0
13	0
14	2.9
15	4.9
16	1.9
17	2.3
18	0
19	2.3
20	2.3
21	0
22	2.4
23	2.0
24	1.9
25	0
26	2.4
27	1.9
28	0
29	1.9
30	1.9
31	2.1
32	3.3
33	0.1
34	2.2
35	2.2
36	3.5
37	3.5
38	2.2
39	2.5
40	0
41	2.0
42	1.8
43	2.2
44	0.4
45	8.2
46	1.6
47	4.8
48	1.3
49	2.2
50	2.1
51	1.4
52	1.5
53	2.1
54	2.2
55	1.4
56	2.2
57	2.2
58	1.4
59	1.4
60	7.4
61	7.4
62	3.6
63	3.5
64	0
65	2.0
66	0.3
67	1.6
68	0
69	4.9
70	1.3
71	1.3
72	1.3
73	1.9
74	1.7
75	0.1
76	0
77	3.3
78	1.3

MODE PIN NO.	DC (V)
79	1.3
80	1.2
81	0
82	4.8
83	3.5
84	3.7
85	2.1
86	2.1
87	2.0
88	3.2
89	0
90	3.2
91	1.6
92	0
93	1.8
94	3.2
95	0
96	1.7
97	3.2
98	0.1
99	0
100	1.8
101	0
102	3.2
103	3.2
104	0
105	0
106	0.2
107	0
108	3.6
109	3.6
110	3.2
111	0
112	3.2
113	2.9
114	3.2
115	0
116	0
117	1.8
118	1.9
119	3.2
120	0.6
121	0
122	0.5
123	0
124	1.7
125	0
126	3.2
127	3.2
128	3.2
IC702	
1	0
2	0
3	0
4	0
5	3.2
6	3.2
7	0
8	3.2
IC801	
1	3.1
2	3.1
3	0.1
IC921	
1	288.4
3	0
4	0
5	31.8
6	3.6
7	0.9
IC972	
1	1.3
2	0
3	3.3
IC973	
1	14.2
2	11.9
3	0
4	3.2
IC974	
1	1.8
2	0
3	0
4	0.5
5	2.9
6	0
7	3.2
IC975	
1	5.2
2	5.0
3	0
4	3.3
IC976	
1	1.8
2	0
3	0
4	0.5

MODE PIN NO.	DC (V)
5	3.0
6	0
7	3.2
Q001	
E	2.8
C	3.5
B	4.8
Q002	
E	3.6
C	3.5
B	4.8
Q101	
E	2.2
C	11.6
B	3.0
Q102	
E	0
C	0
B	3.1
Q103	
E	0
C	0
B	3.0
Q521	
E	0
C	8.9
B	0
Q522	
E	0
C	112.0
B	-0.1
Q571	
E	115.3
C	0
B	114.8
Q572	
E	0
C	3.2
B	0
Q601	
E	8.1
C	0.2
B	8.2
Q602	
E	0.2
C	-0.2
B	0
Q605	
E	0
C	2.3
B	-0.2
Q607	
E	0
C	0
B	0.6
Q608	
E	0
C	14.6
B	0
Q703	
E	3.2
C	0
B	3.2
Q801	
E	2.0
C	0
B	1.3
Q803	
E	0
C	0
B	-1.0
Q805	
E	0.2
C	-1.0
B	0
Q980	
E	14.2
C	6.4
B	14.2
Q981	
E	0
C	14.2
B	0
Q982	
E	0
C	0
B	0.7

MODE PIN NO.	DC (V)
TU001	
1	2.2
2	3.7
3	0
4	3.5
5	3.5
6	4.8
7	4.8
8	0
9	34.6
10	0
11	0

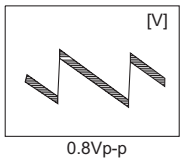
<MAIN PWB (CRT SOCKET)>

MODE PIN NO.	DC (V)
IC351	
1	2.1
2	2.1
3	2.2
4	0
5	5.0
6	185.7
7	114.6
8	118.4
9	121.3

WAVEFORMS

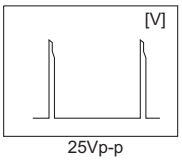
-MAIN PWB-

IC401-1



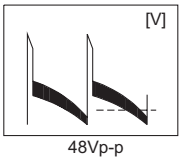
0.8Vp-p

IC401-3



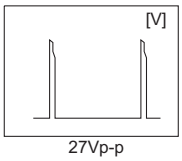
25Vp-p

IC401-5



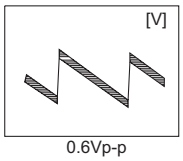
48Vp-p

IC401-6



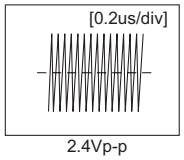
27Vp-p

IC401-7



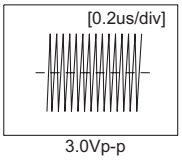
0.6Vp-p

IC701-10



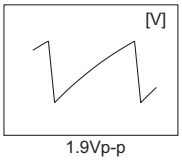
2.4Vp-p

IC701-11



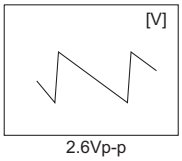
3.0Vp-p

IC701-22



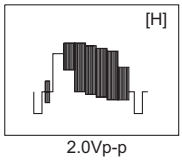
1.9Vp-p

IC701-23



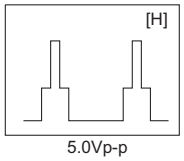
2.6Vp-p

IC701-48



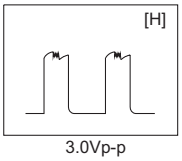
2.0Vp-p

IC701-66



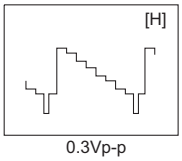
5.0Vp-p

IC701-67



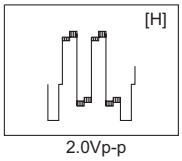
3.0Vp-p

IC701-74



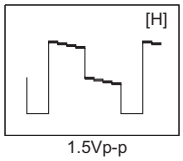
0.3Vp-p

IC701-85



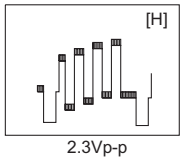
2.0Vp-p

IC701-86



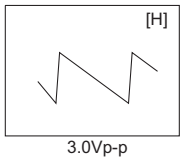
1.5Vp-p

IC701-87



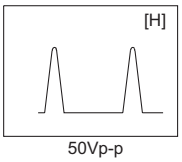
2.3Vp-p

T522-2



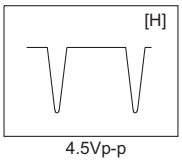
3.0Vp-p

T522-3



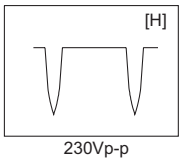
50Vp-p

T522-4



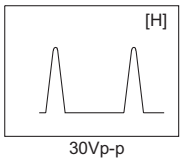
4.5Vp-p

T522-5



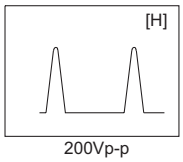
230Vp-p

T522-7



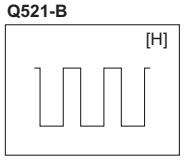
30Vp-p

T522-9



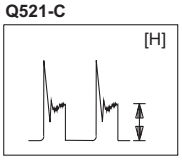
200Vp-p

Q521-B



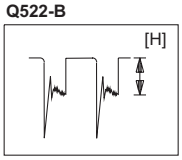
1.4Vp-p

Q521-C



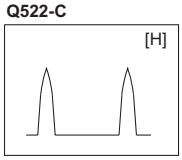
34Vp-p

Q522-B



9.0Vp-p

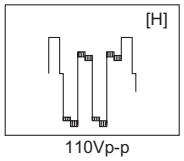
Q522-C



960Vp-p

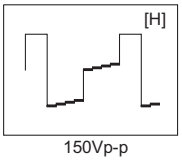
-CRT SOCKET PWB-

IC351-7



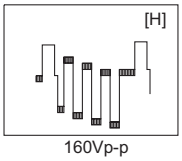
110Vp-p

IC351-8



150Vp-p

IC351-9



160Vp-p

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